

AMENDMENT TO THE CLAIMS

The following is a listing of the claims and their status. Please amend the claims in this application as follows:

Claims 1-43 (Previously Canceled)

44. (Currently Amended) An orthotic foot support device for a human foot, comprising:
a foot support device having a thin flexible stretch-resistant sole member of uniform thickness with a sole engaging surface sized and shaped to engage the having a shape matching less than the entire outline of a sole of a wearer's foot to which the device is to be applied and sized to cover only a portion of the wearer's sole;
~~outer skin tissue on at least a portion the a sole of the a foot and extend along at least a portion of the a plantar fascia region of the a sole, in the a region of the a foot extending from the a heel to the a distal end of the toes, excluding the a portion of the a foot under the four small toes; and~~
an adhesive layer on said sole member engaging surface for securely adhering said device directly to the an outer skin tissue on the sole of the foot, and [[a]] at least one protective cover removably disposed over said adhesive layer which, when removed, exposes said adhesive layer;
~~said stretch-resistant sole member sufficiently stretch-resistant to restrict extension and stretching of the an outer skin tissue on the a sole of the a foot, when adhered thereto, and~~
~~said adhesive layer of sufficient adhesion adhesive strength to maintain said stretch-resistant sole member in place on the in adhesive engagement with an outer skin tissue on the a sole of the a foot, such that tension forces applied to the a plantar fascia are shared with said an outer skin tissue, said adhesive layer, said sole engaging surface, and said stretch-resistant sole member to restrict extension and stretching of the an outer skin tissue of the a sole of the a wearer's foot of the foot and to restrict stretching of the a plantar fascia, whereby preventing excessive tensile stress in the a plantar fascia.~~

45. (Currently Amended) The device according to claim 44, wherein
~~said stretch-resistant sole member has a thickness of less than 30 mils (0.762 mm), has a ratio of elongation (%) to tensile strength (lb/in-width) that is less than 0.9, whereby providing a balanced combination of strength and resistance to elongation.~~

46. (Currently Amended) The device according to claim 44 45, wherein
said stretch-resistant sole member engaging surface is formed of a single layer of fabric
material having a uniform thickness of less than 30 mils (0.762 mm).

47. (Previously Amended) The device according to claim 44, wherein
said stretch-resistant sole member has exhibits less than 15% elongation when subjected to
a tensile load (lb/in-width) approximately equivalent to 25 pounds/inch in accordance to ASTM
D3759.

48. (Currently Amended) The device according to claim 44, further comprising:
a thin flexible arch strap having opposed ends extending laterally outward from opposite
sides of said stretch-resistant sole member engaging surface in a position to at least partially
encircle the a talus, the a navicular, the a cuneiform, or the a cuboid region of the a foot;
an adhesive layer on said arch strap for adhering said arch strap directly to the an outer
skin tissue on the a side sides or top of an arch of the foot, and a protective cover removably
disposed over said adhesive layer which, when removed, exposes said adhesive layer;
said arch strap, when adhered to the an outer skin tissue on the a side sides or top of an
arch of the foot, provides a further means to maintain said sole member adhesively engaged with a
sole of the foot of a wearer providing resistance to vertical and lateral movement of the a talus, the
a navicular, the a cuneiform, or the a cuboid of the a foot and reducing vertical and lateral tension
forces applied to the a plantar fascia from forces on the a arch of the a foot.

49. (Previously Amended) The device according to claim 48, wherein
said arch strap is secured to said device by an adhesive.

50. (Previously Amended) The device according to claim 48, wherein
said arch strap is integrally formed with said device.

51. (Currently Amended) The device according to claim 44, further comprising:
at least one thin flexible heel strap extending rearwardly from said sole member engaging
surface of said device;

an adhesive layer on said heel strap for adhering said heel strap directly to the an outer skin tissue on the a back of the a heel of the a foot, and a protective cover removably disposed over said adhesive layer which, when removed, exposes said adhesive layer;

 said heel strap, when adhered to the an outer skin tissue of the a heel of the a foot providing provides a further means support to maintain the installed position of said sole member said on a sole of a foot.

52. (Previously Amended) The device according to claim 51, wherein
 said heel strap is integrally formed with said device.

53. (Currently Amended) The device according to claim 44, further comprising:

 a thin flexible front strap having opposed ends extending laterally outward from opposite sides of said stretch-resistant sole member engaging surface in a position to at least partially overlap the a top of the a foot above the a ball portion of the a foot;

 an adhesive layer on said front strap for adhering said front strap directly to the an outer skin tissue on the a side sides and a top of the a ball portion of the a foot, and a protective cover removably disposed over said adhesive layer which, when removed, exposes said adhesive layer;

 said front strap, when adhered to the an outer skin tissue on a side the sides and a top of the a ball portion of the a foot providing support to the an area adjacent to the a ball of the a foot to reduce tension forces transferred between the a ball of the a foot and the a plantar fascia provides a further means to maintain said sole member in position on the sole of a wearer's foot.

54. (Currently Amended) The device according to claim 53, wherein
 said front strap is integrally formed with said device.

55. (Previously Presented) The device according to claim 44-47, wherein

 said sole engaging member is comprised of a single woven fabric layer, an adhesive layer and a protective cover layer removably disposed on said adhesive layer includes a medicinal agent selected from the group consisting of anti-fungal agents, anti-microbial agents, anti-inflammatory agents, and deodorants, and tea tree oil.

56. (Currently Amended) An orthotic foot support device for a human foot, comprising:

a foot support device having a thin flexible substantially stretch-resistant sole member ~~with a sole engaging surface sized and shaped to engage the an outer skin surface of at least a portion of the a sole of the an individual's foot to which the device is to be applied excluding the portion of the sole of the foot under the four small toes~~, and an adhesive layer on said sole member engaging surface for adhering said sole member engaging surface directly to ~~the an outer skin surface of the a sole of the a foot; and~~

~~at least one thin flexible strap or tab having an end extending outward from said sole member engaging surface beyond the a sole of the a foot, and an adhesive layer on said strap or tab for adhering said strap or tab directly to the an outer skin surface on a side or the a top of the a foot, wherein said strap or tab adhered to the an outer skin surface of the a foot provides further means for maintaining said sole member in adhesive engagement with the skin tissue on a sole of a foot; said sole engaging member is sufficiently stretch-resistant to restrict extension and stretching of the an outer skin surfaces surface of the a sole when adhered thereto and said adhesive layer on said sole member engaging surface is of sufficient adhesion adhesive strength to maintain said device sole member on the an outer skin surface of the a sole of the a foot so that tension forces applied to the a plantar fascia are shared with said outer skin surface, said adhesive layer, said sole engaging surface and said stretch resistant sole member engaging surface to restrict stretching and extension of the an outer skin tissue on the a sole of the a foot and to restrict stretching off[.] the plantar fascia[.] ; whereby excessive or damaging tensile stress in a plantar fascia is prevented~~

~~said strap or tab adhered to the outer skin surface of the foot provides additional resistance to lateral and longitudinal forces and assists in maintaining said device in the installed position.~~

57. (Currently Amended) The device according to claim 56, wherein

said at least one thin flexible strap or tab comprises an arch strap having at least one end extending laterally outward from a side of said sole member engaging surface in a position to engage ~~the sides a side and at least a portion of the a top of the an arch of the a foot so as to at least partially encircle the a talus, the a navicular, the a cuneiform, or the a cuboid region of the a foot;~~

said arch strap, when adhered to ~~the an outer skin surface surfaces on the sides a side and a top of the a arch of the a foot, provides a further means to maintain said sole member in an~~

~~adhesively engaged position with a sole of a foot providing resistance to vertical and lateral movement of the talus, the navicular, the cuneiform, and or the a cuboid of the a foot and reducing vertical and lateral tension forces applied to the a plantar fascia from forces on the an arch of the a foot which push the bones of the foot downwardly.~~

58. (Currently Amended) The device according to claim 56, wherein

 said at least one thin flexible strap or tab comprises at least one heel strap or heel tab extending ~~rearwardly~~ from said sole engaging surface of said device, and an adhesive layer on said heel strap or heel tab for adhering said heel strap or heel tab directly to the an outer skin surface on ~~the back of the a heel of the a foot;~~

 said heel strap or heel tab, when adhered to the an outer skin surface of the a heel of the a foot providing provides further means for maintaining said sole member in adhesive engagement with a sole of a foot support to the heel of the foot.

59. (Currently Amended) The device according to claim 56, wherein

 said at least one thin flexible strap or tab comprises a front strap having at least one end extending laterally outward from a side of said stretch-resistant sole member engaging surface in a position to at least partially overlap the a top of the a foot above the a ball portion of the a foot, and an adhesive layer on said front strap for adhering said front strap directly to the an outer skin surface surfaces on the a side sides and a top of the a ball portion of the a foot;

 said front strap, when adhered to the an outer skin surface surfaces on a side sides and a top of the a ball portion of the a foot providing provides further means for maintaining said sole member in engagement with a sole of a foot support to the area adjacent to the ball of the foot to reduce tension forces transferred between the ball of the foot and the plantar fascia.

60. (Currently Amended) A support device for a human foot, comprising:

 a thin flexible foot support device of substantially uniform thickness having a stretch-resistant sole member engaging surface sized and shaped to engage and to cover the an outer skin surface on at least a portion the a sole of the a wearer's foot and extend along at least a portion the a plantar fascia region of the foot, an adhesive layer on said sole member engaging surface for adhering said sole member engaging surface directly to the an outer skin tissue on the a sole of the

a wearer's foot, and a protective cover removably disposed over said adhesive layer which, when removed, exposes said adhesive layer; and

a thin flexible arch strap member having a mid portion and opposed ends, an adhesive layer on said arch strap, and a protective cover removably disposed over said adhesive layer which, when removed, exposes said adhesive layer, wherein said arch strap when adhered to a foot provides a further means for maintaining said sole member in adhesive engagement with a sole of a wearer's foot; whereby

~~said arch strap mid portion is adhered to an underside of said sole engaging surface with said opposed ends extending laterally outward from opposite sides thereof and said opposed ends are adhered directly to the outer skin tissue on the sides or top of the arch of the foot in a position to at least partially encircle the talus, the navicular, the cuneiform, or the cuboid region of the foot;~~

said adhesive layer on said sole engaging surface is of sufficient adhesion adhesive strength to maintain said device in place on the outer skin surface on the sole of the foot and said stretch-resistant sole engaging surface is sufficiently stretch-resistant to restrict extension and stretching of the outer skin surface on the sole of the foot, when adhered thereto, so that tension forces applied to the a plantar fascia are shared with said outer skin surface, said adhesive layer and said sole engaging surface to restrict extension and stretching of[[,]]~~the a~~ plantar fascia[[.]]
; and

~~said arch strap, when adhered to said outer skin surface on the sides or top of the arch of the foot, provides resistance to vertical and lateral movement of the talus, the navicular, the cuneiform, or the cuboid of the foot and reducing vertical and lateral tension forces applied to the plantar fascia from forces on the arch of the foot.~~

61. (Currently Amended) The support device according to claim 60, further comprising:

~~at least one thin flexible heel strap extending from said sole member engaging surface and an adhesive layer on said heel strap; wherein~~

~~said heel strap is adhered to the outer skin tissue on the heel of the foot to provide support to help maintain the install position of said device wherein said stretch-resistant sole member exhibits less than 15% elongation when subjected to a tensile load (lb/in-width) equivalent to 25 pounds/inch in accordance with test methods equivalent to ASTM D3759.~~

62. (Currently Amended) A method for restricting extension and stretching of the plantar fascia of a human foot, comprising the steps of:

providing a thin flexible device of substantially uniform thickness having a stretch-resistant sole member engaging surface sized and shaped to be conformed to the an outer skin tissue on at least a portion of the a sole of the a wearer's foot in a region of the foot from the a heel of the a foot to the a distal end of the toes, excluding the region under the four smaller toes; and an adhesive layer on at least a portion of said sole member engaging surface for adhering said device to the outer skin tissue on the sole of the a wearer's foot, said adhesive layer of sufficient adhesive strength to maintain said device in place on the outer skin tissue on the sole of the foot and said stretch-resistant sole engaging surface sufficiently stretch-resistant so as to restrict extension and stretching of the outer skin tissue when adhered thereto;

adhering said sole member engaging surface to the an outer skin tissue on a portion of the a sole of the a foot in a region of the foot from the the heel of the foot to the proximal end of the smaller toes such that tension forces applied to the plantar fascia are shared with said device outer skin tissue, said adhesive layer and said sole member engaging surface to restrict extension and stretching of[[,]] the an outer skin tissue on a sole of a foot, whereby; preventing excessive stress on the a plantar fascia.

63. (Currently Amended) The method according to claim 62, comprising the further steps of:

adhering opposed ends of a thin flexible arch strap extending laterally outward from opposite sides of said stretch-resistant sole member engaging surface to the outer skin tissue on the sides or top of the an arch of the a foot to provide a further means for maintaining said stretch resistant sole member in adhesive contact with a sole of a foot in a position to at least partially encircle the talus, the navicular, the cuneiform, or the cuboid region of the foot so as to provide resistance to vertical and lateral movement of the talus, the navicular, the cuneiform, or the cuboid of the foot and reduce vertical and lateral tension forces applied to the plantar fascia from forces on the arch of the foot.

64. (Currently Amended) The method according to claim 63, wherein

said steps of adhering said arch strap include a preliminary step of adhering a midportion of said arch strap to an underside of said device, and thereafter

adhering said opposed ends of said arch strap to ~~the an~~ outer skin tissue on the sides or top of ~~the an~~ arch of ~~the a~~ foot in a position to at least partially encircle ~~the a~~ talus, ~~the a~~ navicular, ~~the a~~ cuneiform, or ~~the a~~ cuboid region of ~~the a~~ foot.

65. (Currently Amended) The method according to claim 62, comprising the further steps of:
adhering a thin flexible heel strap extending from said sole member engaging surface of said device to ~~the an~~ outer skin tissue on ~~the a~~ back or ~~a~~ side of ~~the a~~ heel of ~~the a~~ foot to provide a further means for maintaining said sole member in adhesive engagement with a sole of a foot.

66. (Currently Amended) The method according to claim 62, wherein
said sole engaging surface is sized and shaped to engage the outer skin tissue on a portion of the sole of ~~the a~~ foot and to extend in a region of the foot from about the a heel of the a foot to about the a ball portion of the a foot, and comprising the further steps of:

adhering opposed ends of a thin flexible front strap extending laterally outward from opposite sides of said stretch-resistant sole member engaging surface to the outer skin tissue on a side ~~the sides~~ or ~~a~~ top of the ball portion of ~~the a~~ foot in a position to overlap at least a portion of the top of the foot above the ball portion of the foot so as to provide support to the area adjacent to the ball of the foot to reduce tension forces transferred between the ball of the foot and the plantar fascia to provide a further means for maintaining said sole member in engagement with a sole of a foot; and wherein said device is used for, or intended to be used for, the treatment or prevention of plantar fasciitis.

67. (Previously Amended) The device according to claim 56, wherein
said stretch-resistant sole member has a thickness of less than 30 mils (0.762 mm) and has exhibits less than 15% elongation when subjected to a tensile load (lb/in-width) approximately equivalent to 25 pounds/inch in accordance with ASTM D3759.

68. (Previously Amended) The device according to claim 60 61, wherein said stretch-resistant sole member is comprised of a single layer of fabric with an adhesive layer wherein said fabric has a thickness of less than 30 mils (0.762 mm).

69. (Currently Amended) The method according to claim 62, comprising the further steps of: removing at least one protective cover removeably disposed over said adhesive layer which, when removed, exposes said adhesive layer, and wherein said sole member engaging surface is of a substantially uniform thickness of less than less than 30 mils (0.762 mm) and has exhibits less than 15% elongation when subjected to a tensile load (lb/in-width) approximately equivalent to 25 pounds/inch in accordance with the test methods of ASTM D3759..

70. (New) An orthotic foot support device for reducing stress on a plantar fascia of a wearer's foot, said device comprising:

a stretch resistant, uniform thickness sole support, having a shape matching less than an entire outline of a sole of an individual's foot where the device is to be applied;
an adhesive layer on said sole support for attaching said sole support to a sole of a foot such that said sole support absorbs tensile stress thus preventing extension and stretching of tissue on a bottom of a foot on which a said sole support is attached, whereby preventing excessive tensile stress in a plantar fascia.

71. (New) The device of claim 70, wherein said device, further comprises;
a protective cover layer detachably disposed on said adhesive layer,
a strap to be affixed to a foot generally transversely to said sole support;
an adhesive layer on said strap for adhering said strap to an outer skin surface of a top or side of a foot;
a protective cover layer detachably disposed on said strap.

72. (New) The device of claim 70 wherein said sole support has a size less than the size of a entire sole of a wearers' foot, and wherein said sole support has a ratio of elongation (%) to tensile strength (lb/in-width) that is less than 0.9 providing a balanced combination of strength and resistance to elongation.

73. (New) The device of claim 72 wherein said sole support includes a woven micro-fiber layer.

74. (New) The device of claim 72 wherein said sole support is less than 30 mils (.762mm) thick, whereby being thin enough to be worn inside socks or shoes.

75. (New) An orthotic foot support device for reducing stress on the plantar fascia of a wearer's foot, said device comprising:

a thin flexible stretch resistant, sole support, shaped to cover only a portion a sole of a wearer's foot on which the device is to be applied, and wherein said sole support does not including a resilient cushion layer; and wherein said sole support has a ratio of elongation (%) to tensile strength (lb/in-width) that is less than 0.9 providing a balanced combination of strength and resistance to elongation;

an adhesive layer on said sole support for attaching said sole support to a sole of a foot so that extension and stretching of tissue on a bottom of a wearer's foot is restricted, whereby preventing excessive tensile stress in a plantar fascia.

76. (New) The device of claim 75, wherein said device, further comprises;

a protective cover layer detachably disposed on said adhesive layer,

a strap to be affixed to a wearer's foot with an end extending outwardly from said sole support;

an adhesive layer on said strap for adhering said strap to an outer skin surface of a wearer's foot;

a protective cover layer detachably disposed on said strap.

77. (New) The device of claims 75 wherein said sole support includes a woven fabric layer which exhibits less than 15 percent elongation when subjected to a 25 lb tensile load under test conditions specified in ASTM D3759, wherein said device includes a protective cover removeably disposed on said adhesive layer and wherein said device is to be used in the treatment of plantar fasciitis or in the prevention of excessive tensile stress in a plantar fascia.

78. (New) A plantar fascia support device for a human foot comprising:

a uniform thickness, sole support, shaped to cover only a portion of a bottom of a wearer's foot where the device is to be applied, wherein said sole support has a ratio of elongation to tensile strength (lb/in-width) that is less than 0.9 to provide a balanced combination of strength and resistance to elongation;

an adhesive layer on said sole support for securely adhering said sole support to an outer skin of a sole of the wearer's foot.

79. (New) The device of claims 78 wherein said sole support is comprised of a single non-resilient support layer, a uniformly applied adhesive layer and a protective cover layer detachably disposed on said adhesive layer; and wherein said sole support exhibits less than 15 percent elongation when subjected to a 25 lb tensile load under test conditions equivalent to those specified in ASTM D3759.

80. (New) The device of claim 78, wherein said device, further comprises;
a protective cover layer detachably disposed on said adhesive layer,
a strap to be affixed to a wearer's foot generally transversely to said sole support;
an adhesive layer on said strap for adhering said strap to an outer skin surface of a top or a side of a wearer's foot;
a protective cover layer detachably disposed on said strap.